

SPPH 524 – Core Biological Concepts of Public Health Practice

Section Standard and Distance Learning – 2014

Credits: 3

Fall Term Class (2013) Information and Location:

Face-to-Face (standard cohort): Mondays, 1:00 PM –4:00 PM (13 weeks, 3h/week)

Distant Learning: Thursday Sept 12, Friday October 18, Sunday November 17 (9:00am-5:00pm)

Room B108, School of Population and Public Health Building

Course Instructor Information:

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Teaching Assistant (Standard Weekly Cohort):

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Teaching Assistant (Distance Learning - DL Cohort):

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Course Exemption:

SPPH 524 is a required course for completion of the MPH degree. Exemption may be granted on an individual basis and at the discretion of the instructor.

Course Overview:

SPPH524, Core Biological Concepts in Public Health, focuses on the biology (physiology and pathophysiology) of diseases relevant to public health. This course is designed for students with diverse backgrounds. The course starts by providing students with a foundational knowledge in biology and key systems, gradually moving towards exploring biological principles of diseases in relation to public health. Topics include a variety of diseases and conditions that are frequently discussed in current public health settings.

The first few classes provide a framework for subsequent classes. These include an introduction to common medical terminology, basic cell biology and general anatomy. Subsequent classes discuss common and relevant illnesses to public health using an organ system approach, exploring first the normal biology/physiology and then pathophysiology of select diseases, followed by discussions on epidemiology and how these diseases influence individuals' lives and public health initiatives. Class discussions include biological and epidemiological determinants, plus evolving issues of lifestyle,

interventions, screening and diagnosis for these diseases, and explore biology and illness from an individual's perspective. Please refer to the Course Schedule for specific topics. Examples of possible topics include:

- Infectious/Communicable Diseases
- Central Nervous System diseases
(Mental health and addiction)
- Neurological illnesses
(Fibromyalgia, Parkinson's and multiple sclerosis)
- Endocrinology diseases
(Diabetes and obesity)
- Respiratory Tract diseases
(Asthma)
- Cardiovascular diseases
(Hypertension, hypercholesterolemia, Myocardial infarct)
- Genitourinary abnormalities
- Musculoskeletal
(Osteoarthritis and rheumatoid arthritis)
- Ageing
- Chronic Pain
- Reproductive System & Women's Health issues
(Hormone replacement therapy)
- Cancer
(Breast, prostate and lung cancer)

Note: This syllabus is representative of a typical Term. Some of the course content may vary from the presented Course Schedule in order to take advantage of unique learning opportunities that may arise in a given Term or to accommodate unforeseeable circumstances and statutory holidays.

Course Outcomes:

Upon completion of this course, you will be able to:

1. Explain and apply basic biological and medical terminologies.
2. Demonstrate an understanding of the chronic diseases covered in class:
 - An understanding of the molecular pathways that are involved in the progression of infectious/communicable diseases of public health importance, and
 - An understanding of why these are important public health issues.
3. Explain the varied molecular mechanisms that can result in the production of cancer cells.
4. Appraise how multi-level factors (physiological and environmental) can cause disease.
5. Create effective messages to promote community health using basic public health principles relevant to health and illness at the population level.

Course Materials

There are three texts (#1 and #2) recommended for this course. It is required that you purchase one of the three to support your learning for this course

1. One of the two anatomy & physiology texts:
 - a. Anatomy & Physiology Made Incredibly Easy! Fourth Edition. By Wolters Kluwer/Lippincott Williams & Wilkins (2012). ISBN: 978-1-4511-4726-1.
 - b. Anatomy & Physiology Made Incredibly Visual. By Wolters Kluwer/Lippincott Williams & Wilkins (2009). ISBN: 978-0-7817-8686-7.
2. Pathophysiology Made Incredibly Easy, Fifth Edition. Publisher Lippincott Williams & Wilkins, 2013. ISBN: 978-1-7817-7912-8 (5th ed). Or ISBN: 978-1-4511-4623-3 (4th ed).
3. Anatomy & Physiology: An Incredibly Easy! Workout. Author(s): Springhouse. Publication Date: 2009. ISBN: 978-0-7817-8303-3.

These books are good references for public health professionals and will be useful to you long after this course is over.

Student Evaluation

You will be evaluated through a combination of written assignments, group presentations, and class participation, according to the following criteria:

1. Debate	15%
2. 1 Student Group presentation	25%
3. 1 Information Brochure	25%
4. 1 four-page written proposal	25%
5. Class Participation	10%

Information about due dates will be provided in class

Class Assignments

• **Class Debate**

Although the course material is primarily conveyed in lectures and student presentations, there is a major focus on class participation. A series of debates is planned for students throughout the semester. These debates will foster further thinking on issues which are often controversial in public health, and will serve as introduction to some of the many arguments and debates which take place in Canada and worldwide.

These debates will be based on topics presented in class, where two opposing groups will present their arguments and rebuttals. Students will not necessarily belong in groups which line up with their opinions, thus requiring role-playing. Students will be evaluated according to:

- Demonstration of biological knowledge and epidemiological derived both from class and student research,
- Formulation of cohesive, comprehensive, and persuasive arguments suitable for an audience which may not necessarily be informed on the issue,
- Student participation by proactively engaging in debate and forming questions as observers, and
- Communication skills

Details about the debate process, topics and schedule will be distributed in class.

• **Information Brochure for the Lay Audience (One Information Sheet)**

Your written assignment is to create a 2-page information sheet to communicate a Public Health Issue in your community. Some examples of topics include: obesity, maternal alcoholism, mental health issues, smoking in young women, prevention of spread of MRSA in a suburban high school, food safety precautions for neighborhood block party, infection control for a halfway house for recovering intravenous drug addicts, behavioral interventions for prevention of sexually transmitted diseases on college campus, etc. Additional examples of topics will be presented in class. While the details will be different for each topic, the structure needs to follow the rubric provided for this assignment. Thinking about what information to include is part of the assignment: What do you think the general public wants to know - or should know - about this topic (target to a specific population)? Is this different from what you think they need to know or should know? How will you help them understand the information? Think about the language you will use, how to arrange the information on the page, using diagrams, etc. How much detail does your audience need? How will you explain difficult concepts? What factors will make somebody want to read what you've written?

Some helpful advice: You will probably need to learn a lot more about the topic than you can actually include on the sheet. The more you know about the topic, the easier it will be to decide which information to include and which to leave out. It might help to ask friends or family members (or other "members of the general public") to read your information sheet and give you feedback. This may be particularly helpful when deciding how to arrange the information on the page and what diagrams to

include. Remember to provide references for your information. You can choose how to do this, but make sure you follow a consistent format.

The assignment will be due by Noon on the due date. Please submit your completed assignment as a .pdf file. Please also submit the text of your document as an MSWord (.doc) file – this will be used to assess for plagiarism with the online tool “Turnitin.com”. Your written assignment will be assessed by the Teaching Assistant.

- **Student Group Presentation (One presentation)**

In groups of three-five, you will create a 50-minute presentation expanding on topics not covered in class or only minimally covered. This allotted time does not include the time for questions and answers. You are expected to use PowerPoint for your presentation, media clips to illustrate relevance of the topic to public health, and interactive learning activities to help your peers understand the assigned topic.

Your presentation needs to be framed in terms of a Public Health issue. Your task is to:

1. Give an overview of the key biological and physiology principles,
2. Discuss 2 key pathophysiology features that are necessary to understanding the disease process,
3. Explain the public health importance of the disease such as disease burden (incidence, prevalence, cost to health care, impact on individuals and families,
4. Discuss how public health programs have (or have not) dealt with this issue.
5. Present 2 existing public health programs aimed at the public to prevent illness or maintain/improve health to prevent further morbidity and mortality as resource for your peers.

Remember that your target audience primarily consists of students who do not have a medical background. It may help to think about what information they need to know in order to understand the issues you are presenting. Your presentation will be assessed by your peers and by the instructional staff. More details will be provided in class.

Please make arrangement with your Teaching Assistant to have your presentation loaded onto the class laptop prior to the start of class. More details will be provided in class.

- **One 4-Page Written Proposal (Group Assignment) – This is a reflection of your learning**

In writing this proposal, your group is expected to address a relevant public health issue affecting society. In your role as public health program developers working for a health advocacy organization, your assignment is to write a 4-page proposal to secure \$10,000 to develop an public health program to better inform individuals/families/communities about a specific disease – for example: preventing the disease or maintaining/improving health to prevent further morbidity and mortality. This proposal will provide relevant information about the disease and make an argument for developing a public health program that addresses an existing gap. Some example of programs for you to consider include: an on-line educational program, an App, a Web-page, a live community program, etc). This assignment is

intended to be a reflection of your learning, and therefore content about the disease should be informed by class presentations. However, you are expected to do additional research to inform yourself of existing public health programs and of their strengths and limitations. Through this assignment, you will gain further insight about the disease of interest, as well as develop an understanding of factors that need to be considered from a public health context.

This proposal should be written for a group of non-health professional new to public health and interested in learning about your topic. You will be provided with a list of select topics presented in class from which to pick your topic. The topic you select for your written proposal should be different from your other class assignment topics. You will write a maximum of 4-page 1.5-spaced summary on your selected topic (excluding bibliography). Use a 12-point Arial font with 1-inch margin on all four sides of the paper. Diagrams and pictures are encouraged to communicate and expand on key physiology and pathophysiology concepts discussed in the text. Write this proposal in your own words, communicating your ideas in a clear and succinct fashion.

Expectations:

The written assignment should: (1) Discuss two-three important (normal) biologic/physiologic aspects of organs and systems involved, (2) Discuss two-three important pathophysiologic changes relevant to the disease, (3) Present incidence & prevalence – Globally, Nationally and Provincially, (4) Discuss how the illness impacts individuals and family (function, psych-social and economic), (5) Outline briefly 2 public health programs along with their strengths and limitations, and (6) Discuss your proposed program and how it will meet an existing gap

The assignment will be due by Noon on the due date. Please submit your completed assignment as a .pdf file to your Teaching Assistant. Please also submit the text of your document as an MSWord (.doc) file – this will be used to assess for plagiarism with the online tool “Turnitin.com”. Your written assignment will be assessed by the Teaching Assistant.

• **Class Participation**

Participation grades will be based on your contributions to class discussions. This includes attendance (since this is a prerequisite to be fully engaged), your ability to listen closely to others without interruption, your ability to treat each other with respect even when disagreeing strongly, your willingness to voice your opinions, and to your contribution to the discussions and questions arising from your classmates. Since engaging in class discussion is contingent on attendance,

You are expected to come to class prepared to actively engage in the topic at hand with classmates and guest lecturers. Come prepared with 1-2 questions about the topic discussed in class. Questions can be about something that you did not understand in the readings, or they can be for discussion. If you have questions or don't understand something, this is the time to get your questions answered.

CLASSROOM ETIQUETTE: The classroom should provide an atmosphere of mutual respect. You are expected to arrive on time to class and remain throughout the scheduled class time. If you need to arrive late or leave early for any reason, please inform the instructor prior to class. The use of cellphones is prohibited in the classroom unless otherwise specified.

LAPTOP ETIQUETTE: You may use your laptop in class if you are viewing handout or making notes on lecture. Please do not use laptop for any other kind of work unrelated to this class; emailing, use of social media, internet surfing, for purposes playing computer games, and other uses unrelated to the course. These practices are disrespectful to me, other lecturers and to other students, and they are distracting and disruptive.

You will keep track of your attendance and self-rate your participation in the classroom. You will be given a form outlining the grading rubric, to keep track of your attendance and participation, which you will submit to your teaching assistant at the end of the Term. The course teaching assistant will verify the information and assign a grade accordingly out of 10%.

Make-up Work, Late Work or Missed Classes

If you miss a class, it is your responsibility to obtain lecture notes, handouts, other materials or instructions from the course website or a classmate. Assignments must be submitted no later than the specified due date and time. All assignments must be emailed to your TA prior to or on the due date. Assignments submitted within 24 hours past the due date will be accepted but will receive an automatic 50% deduction in Grade. No assignment will be accepted 24 hours past the due date. You will be informed in class regarding the submission of a hardcopy.

Grading

(from the UBC Department of Educational Studies, Graduate Course Grading Policy):

90 - 100%	=	A+	68 - 71%	=	B-
85 - 89%	=	A	67 - 64%	=	C+
80 - 84%	=	A-	63 - 60%	=	C
76 - 79%	=	B+	59 - 55%	=	C-
72 - 75%	=	B			

Although a C+, C, or C- grade may be given in a graduate course, the Faculty of Graduate Studies considers 68% as a minimum passing grade for Masters and PhD students.

Course Structure

SPPH 524 is a mixed mode, or *blended*, course. This means that you will be working with your instructor and fellow students in the classroom. It is necessary for you to participate fully in all parts of this course to successfully complete it. The course consists of an inter-related series of lectures, slides and videos, recorded lectures, guest lectures, online material and pre-assigned readings to outline core biological concepts of public health practice. Small group sessions, face-to-face discussions, and assignments provide opportunities to apply these concepts.

The Learning Environment

In addition to the activities above, class time learning will generally include presentations by the course instructor, a guest lecturer, or student groups.

Personal Skills

To enable achievement of the course competencies, you will need to:

1. Develop communication, feedback and conflict-resolution skills in order to work effectively and respectfully with peers and colleagues.
2. Demonstrate professional behavior in all interactions.
3. Reflect on personal skills, abilities and capacities, identify areas in need of improvement and access necessary resources to achieve this.
4. Cultivate personal methods for lifelong learning and skills maintenance, such as time management and organizational skills. Additional information and guidelines on time management and organizational skills can be found in the student handbook from the Centre for Teaching, Learning and Technology (www.ctlt.ubc.ca).

Plagiarism

You are expected to know what constitutes plagiarism and that plagiarism is a form of academic misconduct. As such, plagiarism is subject to penalty. Please review the Plagiarism and Student Discipline sections of the UBC Calendar, available at <http://www.vpacademic.ubc.ca/integrity/policies.htm> , and <http://www.students.ubc.ca/calendar/index.cfm?tree=3,54,0,0>

Accommodations for Students with Disabilities

If you have learning, psychological or physical disability, you may be eligible for reasonable academic accommodations or services. To request accommodations or services, please contact the UBC Access and Diversity Office.